

CLAIMS

1. A method of producing an organic material wherein the material multiplies through a process of germination and wherein the method is characterised therein that it includes a two-stage fermentation process, the method
5 comprising the steps of preparing a starter nutrient medium in which an organic bacterial fungus will grow; adding a starter culture of the organic bacterial fungus to the nutrient medium; permitting the mixture of nutrient medium and fungus culture to undergo a first stage fermentation process; transferring the mixture to a fermentation container; allowing the mixture to
10 undergo a second stage fermentation process until the organic material has germinated fully; and harvesting the organic material.
2. The method as claimed in claim 1 characterised therein that the nutrient medium is an infusion of plant material and water.
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3. The method as claimed in claim 2 characterised therein that the nutrient medium is an infusion of tealeaves and water, wherein the tealeaves are selected from a group including, although not limited to, *Cyclopia Intermedia*, *Matricaria Recutita*, *Aspalathus linearis* and/or Lavender.
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4. The method as claimed in claim 1 characterised therein that the organic bacterial fungus is a fungus colony of the specific plant material to be infused during preparation of the nutrient medium.

5. The method as claimed in claim 1 characterised therein that the method includes the further step of introducing an acidic medium into the starter nutrient medium for reducing pH of the same.
- 5 6. The method as claimed in claim 5 characterised therein that the acidic medium is distilled vinegar.
7. The method as claimed in claim 5 characterised therein that the acidic medium is acidic nutrient medium from a previous fermentation process.
- 10 8. The method as claimed in claim 1 characterised therein that the first stage fermentation process occurs for a period of between 3 and 5 days, while the second stage fermentation process occurs for a period of between 10 and 12 days, or until the organic material has grown into a sheet of approximately 8mm to 10mm thick.
- 15 9. The method as claimed in claim 1 characterised therein that the first stage fermentation process occurs in the absence of direct sunlight.
- 20 10. The method as claimed in claim 1 characterised therein that the mixture remains undisturbed during the first stage fermentation process.
- 25 11. The method as claimed in claim 1 characterised therein that the nutrient medium is maintained at a temperature ranging between 20°C and 30°C, and optimally at a temperature range of 23°C - 28°C, during both the first and the second stage fermentation processes.

12. The method as claimed in claim 1 characterised therein that the fermentation container is an elongate and substantially cylindrical container.

5 13. The method as claimed in claim 1 characterised therein that the fermentation container is a fermentation pipe having a diameter in the order of 100mm, and a length in the order of 6m.

10 14. The method as claimed in claim 1 characterised therein that the mixture of nutrient medium and fungus culture is introduced into the fermentation container such that the surface area of the nutrient medium is below the horizontal centerline of the cylindrical fermentation container, and more particularly, such that the surface area of the nutrient medium is between 8mm and 10mm below the horizontal centerline of the cylindrical fermentation container, the arrangement being such that the sheet material is permitted to germinate until it has reached the horizontal centerline of the fermentation container, after which it is harvested, at which point the sheet material should have a thickness of between 8mm and 10mm.

15 15. A method of producing an organic material wherein the material multiplies through a process of germination, the method comprising the steps of preparing a starter nutrient medium in which an organic bacterial fungus will grow; adding an acidic medium to the starter nutrient medium for reducing pH of the same; adding a starter culture of the organic bacterial fungus to the nutrient medium; and permitting the mixture of acidic starter nutrient medium

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and fungus culture to undergo fermentation until the organic material has germinated fully.

5 16. The method as claimed in claim 15 characterised therein that the acidic medium is distilled vinegar.

17. The method as claimed in claim 15 characterised therein that the acidic medium is an acidic nutrient medium from a previous fermentation process.

10 18. The method as claimed in claim 15 characterised therein that the method includes a two-stage fermentation process wherein the mixture of starter nutrient medium and fungus culture is permitted to undergo a first stage fermentation process, after which the mixture is transferred to a fermentation container and allowed to undergo a second stage fermentation process until
15 the organic material has germinated fully.

19. The method as claimed in claims 1 or 15 characterised therein that the method includes the further step of, subsequent to germination and harvesting of the organic sheet material, utilizing the then nutrient medium
20 resulting from the fermentation process as the starter nutrient medium for growing a second organic sheet material, this further step being characterised therein that it does not require addition of a starter culture of the organic bacterial fungus to the nutrient medium.

5 20. The method as claimed in claim 19 characterised therein that the process of harvesting the organic sheet material and utilizing the then nutrient medium

resulting from the fermentation process as the starter nutrient medium for growing another organic sheet material, without the need for adding additional starter culture to the nutrient medium, is repeated a number of times.

- 5 21. The method as claimed in claims 1 or 15 characterised therein that the material is dried to form a dry sheet.
22. The method as claimed in claims 1 or 15 characterised therein that the material pulverised to form a gel.
- 10 23. The method as claimed in claim 22 characterised therein that the material is mixed with water to form a fire-extinguishing medium and general thermal barrier.
- 15 24. Use of an organic material as claimed in claims 1 and 15 as a fire-extinguishing material in commercial fire extinguishers, sprinkler systems for buildings, ships, trains or the like vehicles, in heat protective clothing, for use in extinguishing forest fires or vegetation fires.
- 20 25. Use of an organic material as claimed in claims 1 and 15 as a fire-prevention material in buildings, aircraft, ships or the like, in paints, varnishes or the like to be applied to buildings, aircraft, ships or the like, in the manufacturing of roof tiles, dry walling, partitions, ceiling boards, cement formulations, on aircraft runway surfaces to decrease fire risks during emergency landings, and inclusion in furniture upholstery, fabrics, polymers and the like.
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26. Use of an organic material as claimed in claims 1 and 15 for extinguishing solvent fires, such as petrol fires by spraying the material onto the fire.
27. Use of an organic material as claimed in claims 1 and 15 in emulsifying oil and water during a process of recovering oil from a source, such as during oil winning from an oil well.
28. Use of an organic material as claimed in claims 1 and 15 for terminating smoke emission by spraying the material over the smoke.
29. A method of producing an organic material substantially as herein illustrated and exemplified with reference to the accompanying drawing and examples.
30. The use of an organic material, produced according to the method of the invention, substantially as herein exemplified with reference to the accompanying examples.